In re Appl. of Lucas et al.
Appl. No. 10/085,890
Response to Final Office Action of June 2, 2003

REMARKS

The Office Action withdrew the objection to the specification and withdrew all rejections to the made under 35 U.S.C. § 112. The Office Action also withdrew the 35 U.S.C. § 102(b) anticipation rejection of claims 1,2,3, 4,5 and 9-12 by Stevenson (U.S. Patent No. 5,254,635) and the 103(a) obviousness rejection of claims 6-8 over Stevenson (U.S. Patent No. 5,254,635) in view of Stevenson (U.S. Patent No. 4,695,609).

The Office Action issued two new rejections. The first rejection rejected claims 1,2,4,5,9-11 and 13 as anticipated by Stevenson (U.S. Patent No. 5,254,635). The Office Action claims that Stevenson '635 teaches an article composed of polyisoprene latex, sulfur, a thiuram compound and a dihydrocarbyl xanthogen polysulfide as a rubber-curing agent. The Office Action continues on to state that the '635 patent provides that the polyisoprene may be in a latex or dry form. The Office Action extrapolates this statement to include liquid latex emulsions of the invention claimed in the '635 patent disclosure. The Office Action concludes that the xanthogen compound is a curing agent and therefore the '635 patent teaches a liquid polyisoprene emulsion with sulfur, a thiuram compound and a xanthogen compound.

The Office Action argues that claims 2,4 and 5 are anticipated because the '635 patent teaches a thiuram compound – tetrabenzyl thiuram disulfide. The Office Action states that the tetrabenzyl thiuram disulfide is present in an amount that falls within the claimed range of 0.45-0.75 parts per 100 parts polyisoprene in this application. The Office Action also argues that claims 9 and 10 are anticipated by the '635 patent because the '635 patent teaches a xanthogen compound in an amount of 0.5-6 parts per 100 parts rubber. The Office Action states that claim 11 is anticipated as well because the '635 patent teaches a contraceptive intended for skin contact.

The Office Action also claims that claim 13 is anticipated by the '635 patent because the '635 patent discloses a formula that could be construed as a diisopropyl xanthogen polysulfide. The Office Action states that the general formula given in the specification, $R^1O\text{-}CS\text{-}S_x\text{-}CS\text{-}OR^2$, if made with an isopropyl group as each of the R groups, as included in the list of choices in the specification, then the result would be a diisopropyl xanthogen.

The Office Action further rejects claims 6-8 under 35 U.S.C. § 103 as obvious over the '635 patent in view of U.S. Patent No. 4,695,609 to Stevenson. The Office Action states that the '635 patent fails to teach the inclusion of zinc dibenzyldithiocarbamate. The Office Action states that the '609 patent discloses the use of dithiocarbamates as accelerators and curing agents for rubber. The Office Action states that the '609 patent specifically discloses zinc dibenzyldithiocarbamate as an accelerator or curing agent and that one of skill in the art would use the teaching of the '609 patent with the teachings of the '635 patent to arrive at the

use of zinc dibenzyldithiocarbamate in making a polyisoprene article as in claim of this application.

The Office Action also claims that claims 7 and 8 are obvious over the '635 patent in view of the '609 patent because the 0.2 parts per 100 parts latex of zinc dibenzyldithiocarbamate disclosed in the '609 patent is obviously adjustable to the 0.3-0.5 parts zinc dibenzyldithiocarbamate per 100 parts latex used in this application in claims 7 and 8. The Office Action states that discovering an optimum value of a result effective variable would be obvious to one of skill in the art.

Claim 1 has been amended to incorporate the limitations of the dependent claims. Claims 2, 4-10, and 13 have been canceled. New claims 14-16 have been added. These claims amendments and new claims place the limitations of the dependent claims in the independent claims and do not reflect new matter.

Additionally, the Office Action's contention that claims 1,2,4,5,9-11 and 13 are anticipated by the Stevenson '635 patent is incorrect. The '635 patent does not qualify as a proper prior art reference because it is not enabling and does not include the claim limitations in the same order as presented in the claims of this application.

To anticipate, a prior art reference must be enabling. *In re Paulsen*, 30 F.3d 1475, 1478-79 (Fed. Cir. 1994). The reference must be enabling to sufficiently place the invention in the possession of the public. *Glaxo Wellcome, Inc. v. Ben Venue Laboratories, Inc.*, 1998 U.S. Dist. LEXIS 19774, * 21 (N.D. Ohio 1998) *citing In re Brown*, 329 F.2d 1006, 1011 (C.C.P.A. 1964). The reference must also allow one of ordinary skill in the art to make or synthesize a compound or composition. M.P.E.P. § 2121.02. Here the Stevenson '635 patent is not enabling for the combination of elements cited in the Office Action. The Stevenson '635 patent does not include, in one embodiment, the combination of a liquid polyisoprene emulsion with sulfur, a thiuram and a xanthogen. The '635 patent instead lists these items in the disclosure, never using them in combination.

Liquid latex emulsions are difficult to make; they require the precise addition of materials in specific amounts. If the materials are added incorrectly or in an incorrect amount, the resulting mixture is unstable and therefore not an emulsion. The '635 patent cannot anticipate because it does not disclose how to make a stable liquid latex emulsion using this combination of elements. It is not enough to baldly recite all the elements; the reference must also be enabling. The '635 patent only discloses working formulations for natural rubber to be used in a mill or Banbury mixer, but fails to teach one of skill in the art how to make the combination of the claimed elements a stable composition with a liquid polyisoprene emulsion. The '635 patent is silent on how one might combine the elements of this invention to make a working emulsion.

There are several questions about making this formulation as an emulsion that the '635 patent leaves unanswered. Would one add liquid, powder or crystal sulfur to the emulsion? What sequence of events comprises the dipping process? Are multiple layers applied when dipping into a liquid latex emulsion to make the invention? These and other questions pertinent to the making of the claimed invention are not disclosed in the '635 patent, rendering the '635 patent not enabling. Because the '635 patent fails to disclose all of these in one embodiment, it does not enable this combination of elements such that it allows one of skill in the art to make and use the invention. The '635 patent cannot serve as a prior art reference because it is not enabling.

Additionally, the law clearly states that for a reference to anticipate "every element of the claimed invention must be identically shown in a single reference, and these elements must be arranged as in the claim under review." *Innovative Design Enterprises, Inc. c. Circulair, Inc.*, 1997 U.S. Dist. LEXIS 12799, *13 (N.D. IL 1997) *citing In re Bond*, 910 F.2d 831, 832 (Fed. Cir. 1990). Other courts have added that the "standard for anticipation is rigorous requiring that every element of the claimed invention, as arranged in the claim, be disclosed either specifically or inherently by a single prior art reference. P.A.T., Co. & Kustom Signals, Inc. v. Ultrak, Inc., 948 F.Supp. 1506, 1510 (1996) *citing Minnesota Mining & Mfg. Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 1565 (Fed. Cir. 1992).

Here, the '635 patent does not disclose the elements as arranged in the claims of this application. Claim 1 of this application requires a composition comprising a liquid polyisoprene latex emulsion, sulfur, a thiuram and a xanthogen. As stated in the Office Action, the '635 patent only contains these elements if you scour the reference to pick out each individual element. The Office Action finds the polyisoprene in column 5, lines 6-12, the sulfur in column 4, lines 35-37, and the thiuram and xanthogens in column 4, lines 3-7. None of the thirteen (13) examples included in the specification include these five elements as arranged in the claims of this application. In fact, nowhere in the '635 patent are these elements present as arranged in claim of this application. Nowhere does this reference teach an emulsion that comprising liquid latex, sulfur, a thiuram and a xanthogen. As a result, the '635 patent is improperly used as a prior art reference.

Additionally, the claim rejections under 35 U.S.C. § 103 were incorrectly raised in the Office Action. Because the '635 patent does not properly qualify as prior art, it cannot be used in combination with another reference to serve as the basis for a rejection. *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1568 (Fed. Cir. 1987) (requiring a reference to qualify as prior art to be used as a reference under 35 U.S.C. § 102 or § 103).

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Conclusion

The application is considered in good and proper form for allowance, and the Examiner is respectfully requested to pass this application to issue. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,

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Date: July 31, 2003

CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that this RESPONSE TO FINAL OFFICE ACTION (along with any documents referred to as attached or enclosed) is being transmitted by facsimile to Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, Attention: Examiner Harold Pyon, Facsimile Number **703-872-9310**, on the date indicated.

KATHY GOIN

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